

REMARKS

This Application has been reviewed in light of the Advisory Action mailed October 24, 2008. At the time of the Advisory Action, Claims 1-12 and 14-22 were pending in this Application. Claims 1-12 and 14-22 were rejected. Claim 13 was previously cancelled. Applicants request reconsideration and allowance of all pending claims.

Claim Objections

Claims 9-22 were objected to based on the use of the term “tangible” in Claims 9-22. Although Applicants disagree with this objection, Applicants have amended the claims to remove the term “tangible.” Independent Claim 9 has been amended to recite “A program product for automatically naming hosts in a distributed data processing system, the program product stored in one or more hardware memory components and comprising ...” Independent Claim 16 has been amended to recite “a network interface in communication with a plurality of hosts, a processor in communication with the network interface, data storage hardware in communication with the processor, and computer instructions stored in the data storage hardware, wherein, when the computer instructions are executed by the processor, the computer instructions perform operations comprising ...”

The Specification provides support for these amendments. For example, the Specification, at page 8, lines 11-25, explains:

Cluster controller 20 and hosts 22 each include a processing core with at least one central processing unit (CPU), as well as data storage in communication with the processing core. The data storage is used to hold or encode data and computer instructions for automatically naming the hosts. The data storage may be implemented as one or more hardware components from technologies including random access memory (RAM), read-only memory (ROM), disk drives, other non-volatile memory components, or any other suitable technology. The computer instructions may also be referred to generally as a program product or specifically as auto-host-naming software. In alternative embodiments, some or all of the control logic for automatically assigned host names may be implemented in hardware. (emphasis added)

Accordingly, Applicants request that the objection to Claims 9-22 be withdrawn.

Rejections under 35 U.S.C. §103

Claims 1-4, 6, 9-11, 16-18, and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication 2002/0161868 by Chakkalamattam J. Paul et al. (“*Paul*”) in view of U.S. Patent 5,974,547 issued to Yevgeniy Klimenko (“*Klimenko*”). Claims 5, 7-8, 12, 14-15, 19 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Paul*, in view of *Klimenko*, in further view of U.S. Patent No. 5,864,656 issued to Jee-Kyoung Park (“*Park*”).

In Applicants’ October 10, 2008 Response to Final Office Action, Applicants explained that the §103(a) rejections set forth in the July 10, 2008 Final Office Action (“Final Office Action”) were identical to those previously presented by the Examiner, e.g., in the Final Office Action mailed October 4, 2006 and the Non-Final Office Action mailed January 14, 2008. In the interest of efficiency, Applicants explained that they maintained their positions regarding the §103(a) rejections from previous papers, instead of copying the arguments in full into the October 10, 2008 Response to Final Office Action.¹

However, the Examiner apparently found this to be insufficient, explaining in the Advisory Action that “Applicant also includes a heading for a response to the 103 rejection but does not present any arguments.” Thus, Applicants provide their arguments regarding the Examiner’s §103(a) rejections below.

A. Rejection under 35 U.S.C. § 103(a) over Paul in view of Klimenko.

(1) Claims 1-4, 6, 16-18, and 20

Summary:

The rejection of independent Claims 1 and 16 as being unpatentable under 35 U.S.C. § 103(a) over Paul in view of Klimenko is improper because neither of Paul nor Klimenko, individually or in combination, disclose, teach or suggest the combination of elements recited in Claims 1 or 16.

The rejection of dependent Claims 2-4 and 6 is improper at least because they depend from and provide further patentable elements to independent Claim 1.

The rejection of dependent Claims 17-18 is improper at least because they depend from and provide further patentable elements to independent Claim 16.

¹ Applicants explained that “Once again, Applicants maintain their positions regarding these rejections (as stated in the Appeal Brief filed December 13, 2007, the Response to Final Office Action mailed February 5, 2007, and the Response to Non-Final Office Action April 14, 2008).” (October 10, 2008 Response to Final Office Action, page 10)

It is a bedrock principle of patent law that, in order to establish a *prima facie* case of obviousness, the references cited by an Examiner in an Office Action must disclose all claimed elements. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Applicants contend that the art cited by the Examiner cannot render the rejected claims obvious, at least because the cited prior art references, taken separately or in combination, fail to disclose, teach or suggest all elements of the rejected claims.

For example, Claim 1 recites:

1. A method for automatically naming hosts in a distributed data processing system, the method comprising:
 - (a) receiving a unique identifier (UID) at a cluster controller from each of a plurality of hosts in communication with the cluster controller, while at least one of the plurality of hosts is executing in a pre boot execution environment;
 - (b) in response to receiving the UIDs, causing the plurality of hosts to produce ready signals;
 - (c) receiving user input from a first host among the plurality of hosts, the user input comprising notification of the insertion of a disk within the first host;
 - (d) in response to receiving the user input from a first host, associating a first host name with the UID for the first host;
 - (e) after associating the first host name with the UID for the first host, causing the first host to produce a completion signal;
 - (f) receiving user input from a second host among the plurality of hosts; and
 - (g) repeating the operations of receiving replies from hosts, associating host names with UIDs, and causing hosts to produce completion signals, until each of the plurality of hosts has been named, such that the user input dictates the order in which host names are assigned to the multiple hosts.

[Note: reference letters (a)-(g) are included for reference only and are not actually included in the pending claims.]

Applicants maintain that *Paul* and *Klimenko*, whether considered alone or in combination, fail to teach or suggest nearly every element -- in particular, elements (a), (b), (c), (d), (e), and (g) -- of Claim 1. As Applicants show below, the passages of *Paul* and *Klimenko* cited by the Examiner clearly do not teach these or suggest elements. In fact, in some instances, the portions of *Paul* and *Klimenko* cited by the Examiner are not even remotely similar to the elements of Claim 1.

Provided below is an element-by-element explanation of how each of elements (a), (b), (c), (d), (e), and (g) of Claim 1 are not taught or suggested by *Paul* or *Klimenko*.

(a) receiving a unique identifier (UID) at a cluster controller from each of a plurality of hosts in communication with the cluster controller, while at least one of the plurality of hosts is executing in a pre boot execution environment;

The Examiner alleged in the Final Office Action that this element is disclosed at *Paul*, paragraph 32. However, paragraph 32 of *Paul* simply discloses:

[0032] PXE specifies the protocols by which a client requests and downloads an executable image from a boot server. PXE does not specify the operational details and functionality of the network bootstrap program (NBP) that the client receives from the server, i.e. the remote boot image downloaded by the PXE client via TFTP or MTFTP (Multicast TFTP). In general, the execution of the downloaded NBP initiates a series of processing steps on the client that ultimately will result in the client being ready for use by its user. Typically, the NBP will use an application program interface (API) specified by PXE and provided by the client PXE support to request and install additional files via M/TFTP from the boot server containing executable images of an operating system, appropriate communications and other device drivers, and other system software. The NBP will then transfer client execution to the operating system which can use either PXE or its own communications support to request user-specific configuration information and application software executable images from the boot server for installation on the client.

As Applicants have previously explained, this passage merely explains that the Preboot Execution Environment (PXE) specifies the communication protocols that a client may use to request a network bootstrap program (NBP) from a boot server, and that when

executed, the NPB requests and installs additional files from the boot server in order to ready the client for use.

Paragraph 32 discloses nothing that could be equated with a “unique identifier (UID),” much less “receiving a unique identifier (UID) at a cluster controller from each of a plurality of hosts,” as recited in Claim 1. After reviewing Paragraph 32 in light of element (a) of Claim 1, Applicants requested that the Examiner indicate precisely which element recited in Paragraph 32 the Examiner believes could be equated with the “unique identifier (UID)” that is received at a cluster controller from each of a plurality of hosts. (See February 5, 2007 Final Office Action Response, page 9). However, the Examiner refused to provide such indication, instead accusing the Applicants of reading the passages “with out context” (See Feb. 14, 2007 Advisory Action, Page 2).

(b) in response to receiving the UIDs, causing the plurality of hosts to produce ready signals; (emphasis added)

The Examiner alleges that this element is disclosed at *Paul*, paragraph 35. (Final Office Action). However, paragraph 35 of *Paul* simply discloses:

[0035] In the PXE protocol, DHCP option fields are used to perform the following: (a) distinguish between DHCPDISCOVER and DHCPREQUEST packets sent by a client as part of this extended protocol from other packets that the DHCP server or boot server might receive; (b) distinguish between DHCPOFFER and DHCPACK packets sent by a DHCP or Proxy DHCP server as part of this extended protocol from other packets that the client may receive; (c) convey the client system's ID (in most cases, the client's UUID--Universally Unique Identifier) to the DHCP and boot server; (d) convey the client system's architecture type to the DHCP server and boot server; and (e) convey the boot server type from which the client is requesting a response. Based on any or all of the client network adapter type, system architecture type, and client system ID, the boot server returns to the client the file name (on the server) of an appropriate NBP executable. The client downloads the specified NBP executable into memory and then executes it. As noted above, the functionality within the downloaded NBP is not specified by the PXE protocol.

The passage discusses various functions performed by DHCP option fields in the PXE protocol, which includes conveying various data between a client, a DHCP server, and a boot

server, including “convey[ing] the client system’s ID (in most cases, the client’s UUID-- Universally Unique Identifier) to the DHCP and boot server.” Based on the client UUID and other data, the boot server sends the client the file name of a particular network bootstrap program (NBP) executable, which the client then downloads and executes in order to boot the client.

The passage does not disclose anything about “causing the plurality of hosts to produce ready signals,” much less doing so “in response to receiving [unique identifiers from each of the plurality of hosts],” as recited in Claim 1. There is no disclosure of a ready signal, much less causing multiple hosts/clients to produce a ready signal in response to receiving identifiers from the multiple hosts/clients.

Applicants have previously requested that the Examiner indicate precisely which action disclosed in Paragraph 35 of *Paul* could be equated with “causing [a] plurality of hosts to produce ready signals,” in response to receiving unique identifiers from each of the plurality of hosts. (See February 5, 2007 Final Office Action Response, page 9). However, the Examiner merely accused the Applicants of reading the passages “with out context,” as discussed above. (See Feb. 14, 2007 Advisory Action, Page 2).

(c) receiving user input from a first host among the plurality of hosts, the user input comprising notification of the insertion of a disk within the first host;

The Examiner correctly acknowledged in the Final Office Action that *Paul* fails to teach this element. Instead, the Examiner alleges that this element is disclosed at *Klimenko*, Col. 4, lines 17-63. However, Column 4, lines 17-63 of *Klimenko* merely recites:

While the boot process is occurring but prior to the availability of any client O/S-based network support, client hard disk emulation occurs through appropriate calls made to an interrupt (Interrupt 13 or simply “Int 13”) handler. Through such calls, appropriate sectors in the client image file are initially downloaded, via a real-mode network adapter (NIC) driver and the Int 13 Handler to remotely install various components of the O/S into client PC. The actual client hard disk emulation process is provided through a real mode procedure that executes as part of Int 13 Handler. In essence, the real mode procedure determines, based on values of status flags, whether the client O/S is then capable of handling a network request for sector access of the client image

file. If the client O/S has not then progressed to that point in its boot process, the real mode procedure processes that request, in real mode, through the Int 13 Handler.

As a client O/S kernel is installed and initialized during the boot process, the kernel installs and activates various device drivers, including the inventive LANHDVSD.VXD procedure. This procedure is compliant with both the Int 13 Handler and with the O/S, specifically, in the case of Windows 95 O/S, a network driver (NDIS--network driver interface specification) kernel therein and the O/S input/output subsystem (IOS). The inventive procedure, which executes as a protected mode driver, contains two asynchronous procedures. These asynchronous procedures, by setting and testing appropriate flags used as processing state semaphores, collectively control the transition of hard disk requests to the networked client image from the Int 13 Handler to the client O/S depending upon, as the client O/S is then booting, the O/S resources that are then available. During early phases of the boot process, insufficient O/S components have been loaded and activated to provide client O/S supported network access. Consequently, client hard disk access requests are handled through the Int 13 Handler. Whenever sufficient O/S resources become available to permit network access through the client O/S, the asynchronous procedures permit these requests to be serviced by the NDIS and IOS components of the client O/S, so as to provide O/S supported network access, rather than by the Int 13 Handler. Hence, these asynchronous procedures collectively assure, in conjunction with Int 13 Handler, seamless and continuous client hard disk emulation during the real-protected transitory state.

As Applicants explained in the Final Office Action Response, there is nothing in this passage regarding the insertion of a disk within a host, much less receiving a “notification of the insertion of a disk within [a] host.” In fact, the only mention of a disk in the passage regards a “client hard disk emulation process,” which does not concern the insertion of a disk within a host or a notification of such an insertion of a disk. Thus, *Klimenko* cannot teach this element.

(d) in response to receiving the user input from a first host, associating a first host name with the UID for the first host; (emphasis added)

The Examiner alleges that this element is disclosed at *Paul*, paragraph 35. Paragraph 35 of *Paul* is reproduced above regarding element (b).

As Applicants explained in the Final Office Action Response, Paragraph 35 fails to disclose a client having both a “host name” and a “unique identifier (UID)” for a particular host, much less *associating* the host name with the “unique identifier (UID) for the particular host. Even assuming for the sake of argument that the “client’s UUID--Universally Unique Identifier” disclosed in Paragraph 35 of *Paul* could be equated with the “unique identifier (UID) for [a] host” of Claim 1, *Paul* fails to disclose associating a host name with the client’s UUID. Further, Paragraph 35 fails to disclose making any association of names or identifiers for a host “in response to receiving . . . user input from [the] host.”

After reviewing Paragraph 35 of *Paul* in light of element (d) of Claim 1, Applicants requested that the Examiner indicate precisely which elements disclosed in Paragraph 35 can be equated with the “first host name” and the “unique identifier (UID)” for a first host, as well as the operation that can be equated with associating a “first host name” with the “unique identifier (UID)” for a first host. (See Feb. 5, 2007 Final Office Action Response, page 10). However, the Examiner merely accused the Applicants of reading the passages “with out context,” as discussed above. (See Feb. 14, 2007 Advisory Action, Page 2).

(e) after associating the first host name with the UID for the first host, causing the first host to produce a completion signal;

The Examiner alleges that this element is disclosed simply at “(*Paul*,).” This is the full extent of the Examiner’s explanation of how *Paul* teaches element (e) of Claim 1. Applicants pointed out this deficiency to the Examiner (See Final Office Action Response, page 10), but the Examiner declined to correct the deficiency.

Applicants assume that the Examiner either forgot to include the paragraph reference, or could not find any portion of *Paul* that could be equated with this element of Claim 1. In any event, the rejection is improper because the Final Office Action failed to cite the prior art

with sufficient specificity under 35 U.S.C. § 132 and 37 C.F.R. § 1.104 to allow Applicants to adequately respond to the rejections.

First, the Final Office Action does not comply with the intent and purpose of 35 U.S.C. § 132 because it fails to properly identify and clearly explain the portions of the cited prior art that allegedly teach element (e) of Claim 1.

In addition to defeating the intent and purpose of 35 U.S.C. § 132, the Final Office Action does not comply with the requirements of 37 C.F.R. § 1.104 due to lack of specificity. 37 C.F.R. § 1.104(c)(2) states:

In rejecting claims for want of novelty or obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be *clearly explained* and each rejected claim specified. (emphasis added).

Because the Final Office Action fails to cite *any* particular portion of *Paul* that allegedly teaches the element of Claim 1 recited above, the Final Office Action fails to comply with both 35 U.S.C. § 132 and 37 C.F.R. § 1.104.

(g) repeating the operations of receiving replies from hosts, associating host names with UIDs, and causing hosts to produce completion signals, until each of the plurality of hosts has been named, such that the user input dictates the order in which host names are assigned to the multiple hosts. (emphasis added)

The Examiner alleges that these elements are disclosed at *Paul*, paragraphs 52 and 64. Paragraph 52 of *Paul* discloses that PXE clients broadcast initial request packets in a network with redundant boot servers. An initial request packet broadcast from a PXE client is received by all boot servers in the network. Any of the boot servers having a properly configured DHCP server service can respond to the initial broadcast request packet. The PXE client can receive one or more boot server responses and choose a response which directs it to a boot server to complete its remote boot.

Paragraph 64 of *Paul* discloses that a determination is made regarding the availability of a local server for booting additional clients and the availability of other servers that have

reported that they are booting additional clients. A determination is then made as to whether or not a PXE Proxy service is currently executing.

Thus, these paragraphs fail to disclose “associating host names with UIDs” or “causing hosts to produce completion signals.” These paragraphs also clearly fail to disclose repeating a set of operations “until each of the plurality of hosts has been named, such that the user input dictates the order in which host names are assigned to the multiple hosts.” Nothing in Paragraphs 52 or 64 of *Paul* discloses a user dictating the order in which host names are assigned to multiple hosts, much less by inserting a disk or disks into the multiple hosts in a desired order.

For at least the reasons discussed above, *Paul* and *Klimenko*, whether considered alone or in combination, fail to teach or suggest several elements of Claim 1. For the same of analogous reasons, the *Paul* and *Klimenko* fail to teach or suggest similar elements of independent Claim 16. Accordingly, the cited references cannot render Claims 1 or 16 obvious.

Therefore, Applicants contend that the arguments provided in the Final Office Action and maintained by the Advisory Action are clearly flawed and the teachings of the cited references do not render Claims 1 or 16 obvious. In addition, Applicants contend that the rejections of Claims 2-4 and 6 (which depend from Claim 1) and Claims 17-18 and 20 (which depend from Claim 16) are improper because such Claims depend from a claim shown to be allowable above.

(2) Claims 9-11 and 22

Summary:

The rejection of independent Claim 9 as being unpatentable under 35 U.S.C. § 103(a) over Paul in view of Klimenko is improper because neither of Paul nor Klimenko, individually or in combination, disclose, teach or suggest the combination of elements recited in Claim 9. The rejection of dependent Claims 10-11 and 22 is improper at least because they depend from and provide further patentable elements to independent Claim 9.

Claim 9 recites:

9. A program product for automatically naming hosts in a distributed data processing system, the program product comprising:

- (a) computer instructions enabling a controller in said distributed data processing system to:
 - (i) receive a unique identifier (UID) from a first host in communication with a cluster controller, at least one of the plurality of hosts not having a fully functional operating system present thereon;
 - (ii) in response to receiving the UID, cause the first host to produce a ready signal;
 - (iii) receive user input from the first host;
 - (iv) in response to receiving the user input from the first host, associate a first host name with the UID for the first host; and
 - (v) after associating the first host name with the UID for the first host, cause the first host to produce a completion signal; and
- (b) a computer-readable medium encoding the computer instructions.

[Note: reference letters (a), (b), and (i)-(v) are included for reference and are not actually present in the pending claims.]

Regarding the substantive rejection of Claim 9, Applicants contend that the Examiner's rejection of Claim 9 under 35 U.S.C. § 103(a) as being unpatentable over *Paul* in view of *Klimenko* is improper because neither of *Paul* nor *Klimenko*, individually or in combination, disclose, teach or suggest the combination of elements recited in Claim 9.

The Examiner rejected Claim 9 based on the same rationale as Claim 1. (See Final Office Action, Page 7: "Claims 9-11, 16-18 and 22 are directed to the same invention as claims 1-4 and 6. Therefore, the supporting rationale of the rejection to claims 1-4 and 6 applies equally as well to claims 9-11, 16-18 and 22".)

Applicants contend that *Paul* and *Klimenko* fail to teach or suggest various elements of Claim 9 for similar or analogous reasons that *Paul* nor *Klimenko* fail to teach or suggest particular elements of Claim 9. For example:

- *Paul* and *Klimenko* fail to teach or suggest “receive a unique identifier (UID) from a first host in communication with a cluster controller, at least one of the plurality of hosts not having a fully functional operating system present thereon” for similar or analogous reasons that *Paul* nor *Klimenko* fail to teach or suggest element (a) of Claim 1, discussed above.
- *Paul* and *Klimenko* fail to teach or suggest “in response to receiving the UID, cause the first host to produce a ready signal” for similar or analogous reasons that *Paul* nor *Klimenko* fail to teach or suggest element (b) of Claim 1, discussed above.
- *Paul* and *Klimenko* fail to teach or suggest “in response to receiving the user input from the first host, associate a first host name with the UID for the first host” for similar or analogous reasons that *Paul* nor *Klimenko* fail to teach or suggest element (d) of Claim 1, discussed above.
- *Paul* and *Klimenko* fail to teach or suggest “after associating the first host name with the UID for the first host, cause the first host to produce a completion signal” for similar or analogous reasons that *Paul* nor *Klimenko* fail to teach or suggest element (e) of Claim 1, discussed above.

For at least the reasons discussed above, *Paul* and *Klimenko*, whether considered alone or in combination, fail to teach or suggest several elements of Claim 9. Accordingly, the cited references cannot render Claim 9 obvious.

Therefore, Applicants contend that the arguments provided in the Final Office Action and maintained by the Advisory Action are clearly flawed and the teachings of the cited references do not render Claim 9 obvious. In addition, Applicants contend that the rejections of Claims 10-11 and 22 (which depend from Claim 9) are improper because such Claims depend from Claim 9, shown to be allowable above.

B. Rejection under 35 U.S.C. § 103(a) over Paul in view of Klimenko and further in view of Park.

(1) Claims 5, 7, 8, 12, 14, 15, 19, and 21

Summary:

The rejection of dependent Claims 5, 7, 8, 12, 14, 15, 19, and 21 as being unpatentable under 35 U.S.C. § 103(a) over Paul in view of Klimenko and further in view of Park is improper because Claims 5, 7, 8, 12, 14, 15, 19, and 21 depend from and provide further patentable elements to independent Claims 1, 9, and 16 shown to be allowable in subsection A above.

Applicants contend that the Examiner's rejection of dependent Claims 5, 7, and 8 as being unpatentable under 35 U.S.C. § 103(a) over *Paul* in view of *Klimenko* and further in view of *Park* is improper because Claims 5, 7, and 8 depend from and provide further patentable elements to independent Claim 1, shown above to be allowable.

Applicants further contend that the Examiner's rejection of dependent Claims 19 and 21 as being unpatentable under 35 U.S.C. § 103(a) over *Paul* in view of *Klimenko* and further in view of *Park* is improper because Claims 19 and 21 depend from and provide further patentable elements to independent Claim 16, shown above to be allowable.

Applicants further contend that the Examiner's rejection of dependent Claims 12, 14, and 15 as being unpatentable under 35 U.S.C. § 103(a) over *Paul* in view of *Klimenko* and further in view of *Park* is improper because Claims 12, 14, and 15 depend from and provide further patentable elements to independent Claim 9, shown above to be allowable.

CONCLUSION

Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants request reconsideration and allowance of Claims 1-12 and 13-21.

Applicants respectfully submit a Request for Continued Examination (RCE) Transmittal, along with a Petition for Two-Month Extension of Time. The Commissioner is authorized to charge the fees of \$810.00 and \$490.00 required to Deposit Account 50-2148 in order to effectuate these filings.

Applicants believe there are no additional fees due at this time. However, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2689.

Respectfully submitted,
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